



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/581,594	06/15/2000	TERUO KUBOTA	1422-428P	9805

2292 7590 02/18/2005

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

DOUYON, LORNA M

ART UNIT	PAPER NUMBER
----------	--------------

1751

DATE MAILED: 02/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/581,594

Applicant(s)

KUBOTA ET AL.

Examiner

Lorna M. Douyon

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to ~~communication(s) filed on~~ RCE filed July 29, 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-13 is/are rejected.
- 7) ☒ Claim(s) 14-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/18/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 29, 2004 has been entered.

2. Claims 1, 3-16 are pending.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 1751

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 3-9, 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita '516.

Yamashita '516 teaches a process for producing nonionic detergent granules having a bulk density of from 0.6 to 1.20 g/ml (600 to 1200 g/l) which comprises mixing a detergent material comprising a nonionic surfactant, granulating the obtained mixture by agitating in an agitating mixer provided at the center position thereof with a rotation shaft having an agitation impeller wherein the agitation impeller agitates the mixture at a Froude number of from 1 to 4, and mixing the obtained granules with from 0.5 to 30 parts by weight of fine particles of a silicate compound having a mean primary particle size of 10 μm or less to thereby coat the surface of the granules with the fine particles, whereby the nonionic detergent granules have excellent granules have excellent powder fluidity and non-caking property (see claim 1).

Yamashita '516 also teaches that the average particle size of the spray dried particulate preferably ranges from 100 to 600 μm , more preferably from 150 to 400 μm (see col. 8, lines 63-65) and the mean particle size of the nonionic detergent granules ranges from 250 to 800 μm , preferably from 300 to 600 μm (see col. 16, lines 12-24). In Examples 7-10, Yamashita '516 exemplifies the preparation of nonionic detergent granules by adding 15 or 30 parts by weight nonionic surfactant to spray dried particulates having a bulk density of 0.70 or 0.43 g/ml and a mean particle size of 210 or 220 μm , agitating the mixture at a Froude number of 2.6, and thereafter adding 15 parts by weight Zeolite 4A having a primary particle size of 3 μm to

Art Unit: 1751

produce nonionic detergent granules having a bulk density of 0.81, 0.72, 0.80 and 0.70, respectively and having a mean particle size in the range 390 to 420 μm (see Table 3 under cols. 23-24; col. 21, line 30 to col. 22, line 63). Yamashita '516 also teaches that the mixer is effected by an agitation impeller attached to the agitation shaft, by rotating spiral ribbon impeller in the fixed vessel, or by a mixing vessel provided with a screw inside the vessel in which mixing of materials is effected by the revolution of a rotating screw around an axis parallel to the vessel wall (see col. 5, lines 7-41). Yamashita '516 also teaches that in general, the temperature of the content in the agitating mixer ranges from 30 to 60°C (see col. 8, lines 27-30). Yamashita '516 also teaches that a binder may be added in amounts from 0.1 to 10 parts by weight, either at the time of mixing the detergent material or the time of granulating the mixture of the detergent material, the binder, for example being polyethylene glycol or polyoxyethylene alkyl ethers (see col. 13, lines 43-58). Yamashita '516, however fails to specifically disclose (a) the nonionic detergent granules having a degree of particle growth of 1.3 or less (the degree of particle growth is defined in the specification on page 36 as the average particle size of final detergent particles divided by the average particle size of base particles), (2) the spray dried particles having a surfactant-supporting ability of 20 ml/100g or more and the dissolution rate of the nonionic detergent granules of 90% or more.

With respect to difference (1), it would have been obvious to one of ordinary skill in the art at the time the invention was made to reasonably expect the degree of particle growth of the nonionic detergent granules of Yamashita '516 to be within those recited because the average particle sizes of the spray dried particles and the mean particle sizes of the nonionic detergent

Art Unit: 1751

granules overlap with each other, hence the degree of particle growth would also overlap and would read on the degree of particle growth as those recited.

With respect to difference (2), it would have been obvious to one of ordinary skill in the art at the time the invention was made to reasonably expect the spray dried particles to have a surfactant-supporting ability of 20 ml/100g or more and the dissolution rate of the nonionic detergent granules of 90% or more because similar process and ingredients having overlapping proportions and particle sizes have been utilized.

6. Claims 1, 3-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita '501 .

Yamashita '501 teaches a method for producing nonionic detergent granules which comprises (I) blending 10 to 60 parts by weight in a total amount of at least one of nonionic surfactant and aqueous nonionic surfactant solution, and acid precursor of the anionic surfactant capable of having a lamellar orientation; 10 to 80 parts by weight of at least one of alkali builder and alkali, porous oil-absorbing carrier; 0 to 10 parts by weight of neutral or acidic builder; and 10 to 80 parts by weight of spray-dried particles (see col. 5, lines 45-53), wherein the spray-dried particles are obtained by spray-drying a water slurry containing one or more organic or inorganic builders (see col. 5, lines 22-25); (II) heating the mixture obtained in step (I) at least up to a temperature capable of neutralizing the acid precursor of the anionic surfactant in an agitating mixer and granulating while tumbling the agitating mixer thereby increasing a bulk density, to give nonionic detergent granules having a bulk density of from 0.6 to 1.0 g/ml (600 to 1200 g/l) (see abstract, col. 3, lines 43-60). Yamashita '501 also teaches that the mixer is effected by an

Art Unit: 1751

agitation impeller attached to the agitation shaft, by rotating spiral ribbon impeller in the fixed vessel, or by a mixing vessel provided with a screw inside the vessel in which mixing of materials is effected by the revolution of a rotating screw around an axis parallel to the vessel wall (see col. 15, lines 8-40). Yamashita '501 also teaches that the agitating mixer equipped with agitating impellers is controlled such that the Froude number is from 1 to 4 (see col. 17, lines 30-48). Yamashita '501 also teaches that the average particle size of the spray dried particulate preferably ranges from 100 to 600 μm , more preferably from 150 to 400 μm (see col. 11, lines 31-34) and the mean particle size of the nonionic detergent granules ranges from 250 to 800 μm , preferably from 300 to 600 μm (see col. 20, lines 17-23). In Example 10, Yamashita '501 exemplifies a process for the preparation of nonionic detergent granules having a bulk density of 0.75 g/ml (750 g/l) which process comprises agitating in a Lödige Mixer dense ash (average particle size: 290 μm), zeolite 4A and spray-dried granules (bulk density: 0.45 g/ml; average particle size: 245 μm), adding while agitating nonionic surfactant and fatty acid mixture to the mixer, and surface coating the detergent granules with zeolite 4A (see col. 25, line 53 to col. 26, line 5; Tables 4 and 6 under col. 27-28). Yamashita '501, however fails to specifically disclose (a) the nonionic detergent granules having a degree of particle growth of 1.3 or less (2) the spray dried particles having a surfactant-supporting ability of 20 ml/100g or more and the dissolution rate of the nonionic detergent granules of 90% or more.

With respect to difference (1), it would have been obvious to one of ordinary skill in the art at the time the invention was made to reasonably expect the degree of particle growth of the nonionic detergent granules of Yamashita '501 to be within those recited because the average particle sizes of the spray dried particles and the mean particle sizes of the nonionic detergent

Art Unit: 1751

granules overlap with each other, hence the degree of particle growth would also overlap and would read on the degree of particle growth as those recited.

With respect to difference (2), it would have been obvious to one of ordinary skill in the art at the time the invention was made to reasonably expect the spray dried particles to have a surfactant-supporting ability of 20 ml/100g or more and the dissolution rate of the nonionic detergent granules of 90% or more because similar process and ingredients having overlapping proportions and particle sizes have been utilized.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1, 3-13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 3 of U.S. Patent No. 6,602,846 in view of Yamashita '501.

US '846 teaches a similar process for preparing detergent particles having the same bulk density and overlapping degree of particle growth which comprises similar steps of mixing base

Art Unit: 1751

particles, having the same particle size and bulk density, with a surfactant, and further mixing with fine powder except for the mixing conditions wherein the agitation impellers have a Froude number as those recited.

Yamashita '501 teaches a similar process, as described above, of producing nonionic detergent granules having a bulk density of from 0.6 to 1.0 g/ml (600 to 1200 g/l) (see abstract, col. 3, lines 43-60), in particular, wherein the agitating mixer is equipped with agitating impellers which is controlled such that the Froude number is from 1 to 4 (see col. 17, lines 30-48).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have performed the mixing in US '846 under mixing conditions wherein the agitating mixer is equipped with agitating impellers which is controlled such that the Froude number is from 1 to 4 because it is shown by Yamashita that such mixing conditions would produce detergent granules having a bulk density from 600 to 1200 g/l.

Allowable Subject Matter

9. Claims 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: Yamashita '516 teaches that when the Froude number is less than 1, compression will not be promoted (see col. 7, lines 58-59), and that when a mixture of a detergent material comprising a nonionic surfactant is subjected to granulation in a condition according to the present invention, it is possible to form an adhesion layer on the inner wall of

Art Unit: 1751

the agitation mixer by rotation of the agitation impeller, thereby high density granules can be produced without causing over power of the agitation mixer (over load of the agitating mixer), decrease in granulation efficiency (formation of coarse granules) and the like (see col. 6, last line to col. 7, lines 8). Likewise, Yamashita '501 teaches that when the Froude number is less than 1, the blending efficiency becomes poor, thereby making it likely to produce granulated products with a broad granular distribution (see col. 17, lines 37-40). Hence, the recited degree of particle growth would not have been achieved with a Froude number of 0.8, 0.83 or 0.85 as required in the present claims.

10. The declaration under 37 CFR 1.132 filed November 2, 2004 is insufficient to overcome the rejection of claims 1, 3-9, 11-13 based upon Yamashita '516, and claims 1, 3-13 based upon Yamashita '501 because the argument that the detergent starting materials in Yamashita '516 or Yamashita '501 are granulated (built-up and agglomerated) so that this process is completely distinguishable from the process for preparing uni-core detergent particles of the present invention (i.e., under mixing conditions such that the composition does not substantially undergo breakdown), is a conclusionary statement unsupported by factual evidence and is therefore insufficient to establish unexpected results. See *In re Linder*, 173 USPQ 356 (CCPA 1972). In addition, the term "substantially undergo breakdown" is a relative term which still reads on the mixing conditions of Yamashita '516 or Yamashita '501.

Art Unit: 1751

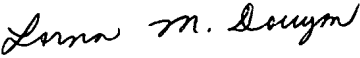
Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. The references are considered cumulative to or less material than those discussed above.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lorna M. Douyon whose telephone number is (571) 272-1313. The examiner can normally be reached on Mondays-Fridays from 8:00AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Lorna M. Douyon
Primary Examiner
Art Unit 1751